

Author Index

Arsenault, R. J., 91

Bashu, S. A., 7

Bean, V., 99

Bellosi, A., 115

Blaschko, O., 257

Block, S., 99

Chen, S. Y., L1

Choi, B. H., 57

Christian, J. W., 215

Clapp, P. C., 189

Filip, P., L19

Fujita, F. E., 243

Gan, D., L1

Gooding, R. J., 183

Grigor'ev, O. N., 65

Grujicic, M., 79

Harmon, B. N., 155

Ho, K. M., 155

Homeny, J., 123

Ji, N., 71

Kamaraj, M., L15

Karmazin, L., L11

Kim, K.-H., 51

Kim, Y.-S., 41

Klueh, R. L., 17

Knorr, K., 265

Krawitz, A. D., 1

Kriven, W. M., 249

Kroupa, A., L11

Krumhansl, J. A., 167

Kwon, H., 51

Lebrun, J. L., 71

Li, J., 85

Lin, G., 85

Liu, Y.-Z., 115

Markashova, L. I., 33

Mazanec, K., L19

Maziasz, P. J., 17

Mo, C.-M., 85

Mori, T., 57

Moss, S. C., 187

Nick, J. J., 123

Nix, W. D., 41

Owen, W. S., 197

Piermarini, G. J., 99

Radhakrishnan, V. M., L15

Rawat, M. S., 7

Raynes, A., 99

Roitburd, A. L., 229

Ruiz, C., 105

Ryaboshapka, K. P., 65

Schryvers, D., 205

Seol, K., 1

Shapiro, S. M., 205

Singh, K., 7

Sprauel, J. M., 71

Stelmashenko, N. A., 65

Suzuki, T., 239

Svoboda, M., L11

Tampieri, A., 115

Tanner, L. E., 137, 205

Turchi, P. E. A., 145

Wakashima, K., 57

Wang, F. G., L7

Wang, L., 91

Wang, Y., L7

Wang, Z. P., 105

Wu, S. S., L1

Wuttig, M., 137, 239

Xu, S. G., L7

Yamada, Y., 167

Zasimchuk, E. E., 33

Zhang, L., 85

Zhu, S. J., L7



Subject Index

- Alkali cyanides
 - ferroelastic phase transitions of alkali halide-alkali cyanide mixed crystals, 265
- Alkali halides
 - ferroelastic phase transitions of alkali halide-alkali cyanide mixed crystals, 265
- Alkali metals
 - martensitic phase transformations in alkali metals and cobalt alloys by neutron scattering techniques, 257
- Alloys
 - calculation of phase compositions of hypereutectoid low alloy steel at temperatures within and around the eutectoid zone, L11
 - contribution of the R transformation to the two-way memory effect in TiNi alloys, 85
 - electronic structure and phase stability: effect of a Bain transformation on the thermodynamic properties of substitutional alloys, 145
 - influence of carbon on creep crack growth of a cast HP alloy, L7
 - internally slipped martensite in TiNi alloys, L19
 - martensitic phase transformations in alkali metals and cobalt alloys by neutron scattering techniques, 257
- Aluminium
 - electron microscopy and neutron scattering studies of premartensitic behavior in ordered Ni–Al β_2 phase, 205
 - microstructure of TiB₂–NiAl, 91
 - microstructure–property relations of alumina–zirconia eutectic ceramics, 123
- Anharmonicity
 - anharmonicity and martensitic instabilities in β cubic structures, 183
- Atomic shuffles
 - analyses of lattice and shape deformations and of atomic shuffles in martensitic transformation, 215
- Austenite
 - stabilization of precipitated austenite in tempered Fe–Mn–C steels, 79
 - tensile and microstructural behavior of solute-modified manganese-stabilized austenitic steels, 17
- Bain transformation
 - electronic structure and phase stability: effect of a Bain transformation on the thermodynamic properties of substitutional alloys, 145
- Boron
 - microstructure of TiB₂–NiAl, 91
- Carbon
 - analysis of broadened X-ray diffraction profiles: application to the characterization of carbon steels, 71
 - anisotropic residual stress relaxation in cemented carbide composites, 1
 - effects of grain boundary carbide on the stress–strain curves of type 316 stainless steel, L1
 - influence of carbon on creep crack growth of a cast HP alloy, L7
- Ceramics
 - damage process of ceramics in contact with metals, 105
 - martensitic toughening of ceramics, 249
 - microstructure–property relations of alumina–zirconia eutectic ceramics, 123
- Chromium
 - effect of heat treatment on mechanical properties and fracture behaviour of a 12CrMoV steel, 7
- Cobalt
 - martensitic phase transformations in alkali metals and cobalt alloys by neutron scattering techniques, 257
- Composites
 - anisotropic residual stress relaxation in cemented carbide composites, 1
 - oxidation behaviour of electroconductive Si₃N₄–TiN composites, 115
 - plastic incompatibility and its accommodation by diffusional flow: modelling of steady state creep of a metal matrix composite, 57
- Copper
 - numerical analysis of creep crack growth in precavitated polycrystalline copper, 41
- Crack growth
 - influence of carbon on creep crack growth of a cast HP alloy, L7
 - numerical analysis of creep crack growth in precavitated polycrystalline copper, 41
- Creep
 - dislocation structure of refractory metal single crystals after high temperature creep—X-ray diffraction study, 65
 - influence of carbon on creep crack growth of a cast HP alloy, L7
 - numerical analysis of creep crack growth in precavitated polycrystalline copper, 41
 - plastic incompatibility and its accommodation by diffusional flow: modelling of steady state creep of a metal matrix composite, 57
- Damage
 - damage process of ceramics in contact with metals, 105
- Defects
 - critical role of defects in first-order displacive transformations, 189
- Deformation
 - analyses of lattice and shape deformations and of atomic shuffles in martensitic transformation, 215
 - microbands in rolling-deformed nickel single crystals, 33
- Diffusion
 - plastic incompatibility and its accommodation by diffusional flow: modelling of steady state creep of a metal matrix composite, 57
- Dislocations
 - dislocation structure of refractory metal single crystals after high temperature creep—X-ray diffraction study, 65

- Electroconductivity
 - oxidation behaviour of electroconductive Si_3N_4 -TiN composites, 115
- Electron microscopy
 - electron microscopy and neutron scattering studies of premartensitic behavior in ordered Ni-Al β_2 phase, 205
- Electronic structure
 - electronic structure and phase stability: effect of a Bain transformation on the thermodynamic properties of substitutional alloys, 145
- Embrittlement
 - secondary hardening embrittlement in W-Ni steels, 51
- Eutectoid zone
 - calculation of phase compositions of hypereutectoid low alloy steel at temperatures within and around the eutectoid zone, L11
- Ferroelastics
 - ferroelastic phase transitions of alkali halide-alkali cyanide mixed crystals, 265
- Fracture
 - effect of heat treatment on mechanical properties and fracture behaviour of a 12CrMoV steel, 7
- Grain boundaries
 - effects of grain boundary carbide on the stress-strain curves of type 316 stainless steel, L1
- Grain boundary carbide
 - effects of grain boundary carbide on the stress-strain curves of type 316 stainless steel, L1
- Hardening
 - secondary hardening embrittlement in W-Ni steels, 51
- Instabilities
 - anharmonicity and martensitic instabilities in β cubic structures, 183
- Iron
 - influence of lattice softening of the parent phase on the martensitic transformation in Fe-Ni and Fe-Pt alloys, 197
 - stabilization of precipitated austenite in tempered Fe-Mn-C steels, 79
- Lattice softening
 - influence of lattice softening of the parent phase on the martensitic transformation in Fe-Ni and Fe-Pt alloys, 197
- Manganese
 - stabilization of precipitated austenite in tempered Fe-Mn-C steels, 79
 - tensile and microstructural behavior of solute-modified manganese-stabilized austenitic steels, 17
- Martensite
 - analyses of lattice and shape deformations and of atomic shuffles in martensitic transformation, 215
 - anharmonicity and martensitic instabilities in β cubic structures, 183
 - aspects of first-order displacive phase transformations: martensites, 167
 - formation of martensite, 239
 - influence of lattice softening of the parent phase on the martensitic transformation in Fe-Ni and Fe-Pt alloys, 197
 - internally slipped martensite in TiNi alloys, L19
 - martensitic phase transformations in alkali metals and cobalt alloys by neutron scattering techniques, 257
 - martensitic toughening of ceramics, 249
 - statistical thermodynamic theory of pre-martensitic tweed structure, 243
 - thermodynamics of martensite nucleation, 229
- Martensite nucleation
 - thermodynamics of martensite nucleation, 229
- Mechanical properties
 - effect of heat treatment on mechanical properties and fracture behaviour of a 12CrMoV steel, 7
- Memory effect
 - contribution of the R transformation to the two-way memory effect in TiNi alloys, 85
- Microbands
 - microbands in rolling-deformed nickel single crystals, 33
- Microstructure
 - microstructure of TiB_2 -NiAl, 91
 - microstructure-property relations of alumina-zirconia eutectic ceramics, 123
 - tensile and microstructural behavior of solute-modified manganese-stabilized austenitic steels, 17
- Molybdenum
 - effect of heat treatment on mechanical properties and fracture behaviour of a 12CrMoV steel, 7
- Neutron scattering
 - electron microscopy and neutron scattering studies of premartensitic behavior in ordered Ni-Al β_2 phase, 205
 - martensitic phase transformations in alkali metals and cobalt alloys by neutron scattering techniques, 257
- Nickel
 - contribution of the R transformation to the two-way memory effect in TiNi alloys, 85
 - electron microscopy and neutron scattering studies of premartensitic behavior in ordered Ni-Al β_2 phase, 205
 - influence of lattice softening of the parent phase on the martensitic transformation in Fe-Ni and Fe-Pt alloys, 197
 - internally slipped martensite in TiNi alloys, L19
 - microbands in rolling-deformed nickel single crystals, 33
 - microstructure of TiB_2 -NiAl, 91
 - secondary hardening embrittlement in W-Ni steels, 51
- Nitrogen
 - oxidation behaviour of electroconductive Si_3N_4 -TiN composites, 115
- Numerical analysis
 - numerical analysis of creep crack growth in precavitated polycrystalline copper, 41
- Oxidation
 - oxidation behaviour of electroconductive Si_3N_4 -TiN composites, 115
- Oxygen
 - microstructure-property relations of alumina-zirconia eutectic ceramics, 123
- Phase stability
 - electronic structure and phase stability: effect of a Bain transformation on the thermodynamic properties of substitutional alloys, 145

- Plastic incompatibility
plastic incompatibility and its accommodation by diffusional flow: modelling of steady state creep of a metal matrix composite, 57
- Platinum
influence of lattice softening of the parent phase on the martensitic transformation in Fe-Ni and Fe-Pt alloys, 197
- Precipitation
stabilization of precipitated austenite in tempered Fe-Mn-C steels, 79
- Premartensitic behavior
electron microscopy and neutron scattering studies of premartensitic behavior in ordered Ni-Al β_2 phase, 205
- R transformation
contribution of the R transformation to the two-way memory effect in TiNi alloys, 85
- Refractory metals
dislocation structure of refractory metal single crystals after high temperature creep—X-ray diffraction study, 65
- Rupture
relation between rupture time and steady state rate integral, 515
- Silicon
oxidation behaviour of electroconductive Si_3N_4 -TiN composites, 115
- Sintering
pressure sintering and transformation toughening of zinc sulfide, 99
- Softening
influence of lattice softening of the parent phase on the martensitic transformation in Fe-Ni and Fe-Pt alloys, 197
- Stabilization
stabilization of precipitated austenite in tempered Fe-Mn-C steels, 79
- Steels
analysis of broadened X-ray diffraction profiles: application to the characterization of carbon steels, 71
calculation of phase compositions of hypereutectoid low alloy steel at temperatures within and around the eutectoid zone, L11
effect of heat treatment on mechanical properties and fracture behaviour of a 12CrMoV steel, 7
effects of grain boundary carbide on the stress-strain curves of type 316 stainless steel, L1
secondary hardening embrittlement in W-Ni steels, 51
tensile and microstructural behavior of solute-modified manganese-stabilized austenitic steels, 17
- Strain
effects of grain boundary carbide on the stress-strain curves of type 316 stainless steel, L1
- Stress
anisotropic residual stress relaxation in cemented carbide composites, 1
effects of grain boundary carbide on the stress-strain curves of type 316 stainless steel, L1
- Stress relaxation
anisotropic residual stress relaxation in cemented carbide composites, 1
- Sulphur
pressure sintering and transformation toughening of zinc sulfide, 99
- Tempering
stabilization of precipitated austenite in tempered Fe-Mn-C steels, 79
- Tensile behaviour
tensile and microstructural behavior of solute-modified manganese-stabilized austenitic steels, 17
- Thermodynamic properties
electronic structure and phase stability: effect of a Bain transformation on the thermodynamic properties of substitutional alloys, 145
- Thermodynamics
statistical thermodynamic theory of pre-martensitic tweed structure, 243
thermodynamics of martensite nucleation, 229
- Titanium
contribution of the R transformation to the two-way memory effect in TiNi alloys, 85
internally slipped martensite in TiNi alloys, L19
microstructure of TiB_2 -NiAl, 91
oxidation behaviour of electroconductive Si_3N_4 -TiN composites, 115
- Total energy calculations
first-principles total energy calculations applied to displacive transformations, 155
- Toughening
martensitic toughening of ceramics, 249
pressure sintering and transformation toughening of zinc sulfide, 99
- Tungsten
secondary hardening embrittlement in W-Ni steels, 51
- Tweed structure
statistical thermodynamic theory of pre-martensitic tweed structure, 243
- Vanadium
effect of heat treatment on mechanical properties and fracture behaviour of a 12CrMoV steel, 7
- X-ray diffraction
analysis of broadened X-ray diffraction profiles: application to the characterization of carbon steels, 71
dislocation structure of refractory metal single crystals after high temperature creep—X-ray diffraction study, 65
- Zinc
pressure sintering and transformation toughening of zinc sulfide, 99
- Zirconia
microstructure-property relations of alumina-zirconia eutectic ceramics, 123

